

YEGOROV, Ye.M., kand. tekhn. nauk

Expanding the construction of reinforced concrete docks. Sudostroenie  
31 no. 1:56-59 Ja '65. (MIRA 18:3)

*YEGOROV, Ye. A.*  
VEBER, V.V., professor; GORSKAYA, A.I.; YEGOROV, Ye. A.; MANUCHAROVA, Ye. A.;  
MESSINEVA, M.A.; RADCHENKO, O.A.; REMEZOVA, T.S.; ROMM, I.I.;  
SAVICH, V.G.; SKADOVSKIY, S.N.; UL'M, V.A.; FOKINA, N.I.; FORSH, T.B.;  
SHABAROVA, N.T.; SHCHAPOVA, T.F.; KBERZIN, A.G.; YURKEVICH, I.A.

Results of the comprehensive study of contemporary analogues of oil-  
bearing facies. Trudy VNIGNI no.2:111-121 '51. (MLRA 10:4)  
(Petroleum geology)

YEGOROV, Ye. N.

"Observations of the Dynamics of Underwater Sand Banks," *Trudy Inst. Okeanol.*,  
pp. 88-98, No.6, 1951

The author describes the variations in the profile of sand banks from 17 June  
to 29 September 1949 on the Black Sea.

U-1499, 4 Oct 51

YEGOROV, Ye. N.

"On Some Forms of Accumulative Shore Which are Connected with Longitudinal Shifting of Alluvia," Dokl. AN SSSR, 80, No.5, pp 813-15, 1951

Inst. Oceanology, AS USSR

YEGOROV, YE. N.

Observations on Beach Scallops

After a detailed description of beach scallops, studied in various stages of their development on pebbly beaches of the Black Sea, on sandy beaches of the Black and Caspian Seas, and on Lake Baykal, the author arrives at the following conclusions relative to the genesis of these forms: beach scallops are formed for various slopes on the bottom, only the latter guaranteeing the arrival to shore of waves able to form more or less significant scallops (braids), and for various inclinations of the beach complicated by boulders, pebbles, gravel, or sand. (RZhGeol, No. 5, 1955) Tr. In-ta okeanol. AN SSSR, 7, 1953, 117-125.

SO: Sum. No. 744, 8 Dec 55 - Supplementary Survey of Soviet Scientific Abstracts (17)

YEGOROV, Ye.N.

Role of eolian processes in the dynamics of an accumulative beach  
and off-shore shallows. Trudy Inst.ocean. 7:126-134 '53.

(MIRA 7:3)

(Beaches)

YEGOROV, YE. N.

"Some Peculiarities of Wave Motion and Undulatory Currents in a Zone of Submarine Walls," Tr. In-ta okeanol. AN SSSR, 8, 1954, pp 229-241

Peculiarities of undulatory currents in a zone of submarine walls are analyzed, using 3-year observations of shore waters of the Black Sea. Observational methods are described, and the results are connected to stationary studies of dynamics of submarine walls and to observations of divers.

RZhFiz, No 3, 1955

YEGOROV, Ye.N.

Some feature of the dynamics of off-shore shallows accumulation.  
Trudy Inst.geog.68:54-68 '56. (MIRA 9:9)  
(Seashore)

YEGOROV, Ya. N., kandidat geograficheskikh nauk; ZENKOVICH, V.P., professor,  
doktor geograficheskikh nauk; MATVEYEV, V.K., kandidat khimicheskikh  
nauk; PATRIKEYEV, V.V., kandidat khimicheskikh nauk.

Methods for studying the shifting of sand bars in the sea, Transp.  
stroil. 7 no.3:21-22 Mr '57. (MLRA 10:6)  
(Sand bars)

ZENKOVICH, V.P.; YEGOROV, Ye.N.

~~Investigating the displacement of sand drifts.~~ Trudy Inst. okean.  
21:40-46 '57. (MLRA 10:7)

(Sand bars)

YEGOROV, Ye.N.

Stability of contours of irregular coasts subjected to action  
of a wave-resultant normal to the coast line. Trudy Inst. okean.  
21:107-117 '57 (MLRA 10:7)  
(Shore lines)

YEGOROV, Ye.H.; POPOV, B.A.

Experimental ropeway for studying the motion of littoral deposits.  
(MIRA 11r5)  
Trudy Inst. okean. 28:30-36 '58.  
(Seashore) (Alluvium)

YEGOROV, Ye.N.

A way of improving seashore-protecting structures. Trudy Inst.  
ocean. 53:37-41 '61. (MIRA 15:2)  
(Shore protection)

YEGOROV, Ye.N.; KAS'YANOV, B.L.

Intensive transformations of seashores caused by the advancement  
or river deltas and the construction of piers. Trudy Inst. okean.  
53:42-51 '61. (MIRA 15:2)

(Coast changes)

YECOROV, Ye.N.; GALANOV, L.G.

Some intermediate relief forms in the zone of underwater bars.  
Trudy Inst. okean. 53:52-57 '61. (MIRA 15:2)  
(Black Sea—Sand bars)(Azov, Sea of—Sand bars)

YEGOROV, Ye.N., kand.geograf.nauk; GALANOV, L.O.

A short-lived storm. Priroda 51 no.1:90-92 Ja '62. (MIRA 15:1)

1. Laboratoriya dinamiki beregov Chernomorskoy eksperimental'noy  
nauchno-issledovatel'skoy stantsii Instituta okeanologii AN SSSR.  
(Azov, Sea of--Storms)

YEGOROV, Ye.N., kand.geograf.nauk (Gelendzhik)

Let's stop the destruction of southern beaches. Priroda 51  
no.3:54-56 Mr '62. (MIRA 15:3)

(Beach erosion)

YEGOROV, Ye.P.

G.

USSR/Zooparasitology - General Problems.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 48170

Author : Egorov, E.P.

Inst :

Title : Concerning the Spread of the Intestinal Protozoa in the Tadjikistan Population.

Orig Pub : Zdravookhr. Tadzhikistana, 1957, No 1, 19-23.

Abstract : In a single examination of the adult population of Tadjikistan (1029 men), there were disclosed: Entamoeba coli in 38%, E. histolytica in 19.9%, E. hartmanni in 8.7%, Endolimax nana in 21.5%, Jodamoeba butshlii in 29.1%, Lamblia intestinalis in 15.1%, Chilomastix mesnili in 16% and Trichomonas hominis in 23% of those examined.

Card 1/1

YEGOROV, Ye. P.

BOLEPOVSKAYA, I. K., BYKHOVSKIY, YA. A., YEGOROV, E. P., Engrs. KLEBANOV, E. S.,  
MEDVEDEV, V. I., MYAKOCHINA, N. G.

Telephone

Long distance, high frequency communication over electric transmission lines.  
Elektrichestvo no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

S/137/61/000/007/033/072  
A060/A101

AUTHOR: Yegorov, Ye.. P.

TITLE: Automatic regulation of sheet thickness on continuous hot-rolling mill

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1961, 15-16, abstract 7D122 ("Tr. Konferentsii: Tekhn. progress v tekhnol. prokatn. proiz-va", Sverdlovsk, Metallurgizdat, 1960, 486-500)

TEXT: Thickness variations of sheet may be avoided by automatic regulation of the operation of the planishing group of the mill. At the present time three systems for measuring the strip thickness of the main factors affecting it are proposed and adopted for development and testing. 1. The system uses an X-ray meter as sheet thickness sensor. The measurement is carried out without contact and thicknesses of 1.3 - 4.2 mm may be controlled with an error of  $\leq 0.04$  mm. 2. The system uses the metal pressure upon the rolls and the gap between them. The initial gap is controlled by a rheochord coupled directly to the pressure screw. Signals from the rheochord and the dynamometer are fed to an arithmetic unit where they are compared with the dimension specified. 3. The regulation

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Automatic regulation of sheet thickness ...

S/137/61/000/007/033/072  
A060/A101

system is based on compensating the two main factors affecting the thickness variations: the temperature drop and the absence of tension at the rear end of the strip. In all the cases pulses from the sensors are fed to the mechanism controlling the pressure screws, by displacing which the correction of thickness variations is executed.

Yu. Manegin

[Abstracter's note: Complete translation]

Card 2/2

S/035/61/000/005/033/042  
A001/A101

8.2/00

AUTHOR: Yegorov, Ye.P.

TITLE: Servosystems with a converter of spherical coordinates as applied to astronomical problems

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 5, 1961, 77, abstract 5A520 ("Sb. rabot po vopr. elektromekhan. In-t elektromekhan. AN SSSR", 1960, no. 4, 174-188)

TEXT: To automate the observational process, the Institute of Electromechanics AS USSR has constructed a system of automatic matching the rotation of the dome and displacements of the wind curtain with the movement of the telescope tube on the equatorial mounting. The main unit for synchronization of the instrument and the dome is a coordinate converter of the type of an analog computer. Input data of the computer are equatorial coordinates of the observation object (hour angle  $t$  and declination  $\delta$ ); output data are azimuthal coordinates of the dome slit aperture (azimuth  $A$  and zenith distance  $z$ ). Two systems of coordinate conversion were developed:  $\Pi K III$  (PK-III) and  $\Pi K - V$  (PK-IV). Their kinematic diagrams are presented. To facilitate conditions of the coordinate converter operation and to increase the operational zone, an additional contact servosystem for turning the

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22398

Servosystems with a converter ...

S/035/61/000/005/033/042  
A001/A101

azimuthal arc was provided. A d.c. motor functions as a servomotor in this system. To work out azimuths, servosystems of rough and precise reading are utilized. The following elements are incorporated into the system of automatic matching of movements of the dome and telescope; 1) The systems for inserting equatorial coordinates  $t$  and  $\delta$  of the position of the telescope tube. 2) The system for inserting the azimuth arc of the coordinate converter. 3) The system for working out azimuthal coordinates  $A$  and  $z$  of the dome slit aperture. 4) The system for automatic transposing the dome at the zenith point. 5) The blocking system of the circuit at the transposing process. 6) The power supply unit. The automatic servosystems with coordinate converters of types PK-III and PK-IV were investigated under laboratory conditions of ИЭМ (ИЕМ) and at the Crimean Observatory on the operating telescope МТМ-500 (PK-III) and 16"-telescope (PK-IV) in 1956-1958. The test results have shown the possibility of their application on the corresponding instruments. The errors of the system in solving the problem of finding  $A = f(t, \delta)$  at  $\varphi = \text{const}$  do not exceed  $1 - 2^\circ$  in the system with PK-III and  $0.25 - 0.5$  in the system with PK-IV.

M. Ishchenko

[Abstracter's note: Complete translation]

Card 2/2

L 33913-60 EWT(d)/EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(1) IJP(9)  
 ACC NR: AP6017639 JD/HW (N) SOURCE CODE: UR/0133/66/000/001/0050/0055 52  
 8

AUTHOR: Dobronravov, D. N.; Lyambakh, R. V.; Stupnikov, E. G.; Shishkinskiy, V. I.;  
 Burdin, V. M.; Muzalevskiy, O. G.; Yevdokimov, A. S.; Yegorov, Ye. P.; Leont'yov,  
 S. A.; Smest'kin, A. G.; Khusid, S. Ye.

ORG: Central Automation Laboratory (Tsentral'naya laboratoriya avtomatiki);  
 TsNIICHM; Magnitogorsk Metallurgical Combine (Magnitogorskiy metallurgicheskiy  
 kombinat)

TITLE: Experimental operation of an automatic system for controlling strip thickness  
 on the 2500 continuous sheet mill 14 15

SOURCE: Stal', no. 1, 1966, 50-55

TOPIC TAGS: hot rolling, automatic control equipment, *steel*

ABSTRACT: An automatic control system was developed for regulating the thickness of  
 steel strip, consisting of regulators of the gaps between the work rolls, and of a  
 system stabilizing the tension of the strip between the stands. The automatic con-  
 trol system yielded satisfactory performance data on the 2500 continuous hot-rolling  
 mill, and for the majority of the strip profiles studied, decreased the longitudinal  
 variation in thickness and maintained a more accurate nominal strip thickness than  
 had been possible before. In the presence of the automatic control system, the  
 strips are rolled with deviations of no more than  $\pm 0.05$  mm (with the exception of

UDC: 621.771.23:65.011.56

Card 1/2

L 55213-66

ACC NR: AP6017639

• short rear portions of the strip, where the positive deviation reaches 0.1-0.15 mm). Without the automatic control system, the length of the strip ends thickened by 0.3-0.2 mm reaches 50-100 m. The decrease in the length of thickened portions of the strip and a more accurate control of nominal strip thickness result in a 1.5% average increase in strip length. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 11,13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001

Card 2/2 *llh*

BELEKHOV, Gennadiy Petrovich, Kandidat sel'skokhozyaystvennykh nauk,  
YEGOROV, Yevgeniy Vladimirovich, zasluzhennyy zootekhnik RSFSR;  
VOROB'YEV, P.I., redaktor; VODOLAGINA, S.D., tekhnicheskiy redaktor

[Dairying in Volosovo District] Molochnoe zhivotnovodstvo Volosov-  
skogo raiona. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 125 p.

(MLRA 9:8)

1, Glavnyy zootekhnik Volosovskoy mashinno-traktornoy stantsii,  
(for Yegorov)

(Volosovo District--Dairying)

**"APPROVED FOR RELEASE: 09/01/2001**

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recorded by a thermograph, which produced the heat evolution curve vs the time of irradiation. Analytical processing of the data gave the curves of the reduced polymerization rate vs dose rate and the degree of conversion. It was found that, as in thermal polymerization,

ZHABROVA, G.M.; YEGOROV, Ye.V.

Radiochemical study of the sorption of electrolytes and the chemical interaction between electrolytes and zinc oxide. Radiokhimiia 1 no.5: 538-544 '59. (MIRA 13:2)  
(Electrolytes) (Sorption) (zinc oxide)

66856

SOV/76-33-11-11/47

5.1190

5(4)

AUTHORS:

Zhabrova, G. M., Vladimirova, V. I., Yegorov, Ye. V.

TITLE:

Data From the Conference on Physics and Physical Chemistry of Catalysis (March 1958). Influence of Sorbed Impurities on the Catalytic Properties of Zinc Oxide

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2442-2450 (USSR)

ABSTRACT:

The sorption of ions may occur on oxide and hydroxide catalysts by dissolution of the catalyst itself. A typical catalyst of this type is zinc oxide. The authors investigated the dependence between the rules governing the sorption of impurities, their chemical character, the stability of the bond, the chemical nature of the impurities and their influence on the activity and selectivity of a zinc oxide catalyst. The investigations were carried out in the sorption of phosphoric acid, sulfuric acid, sodium hydroxide, sodium chloride, and zinc chloride. The quantity of sorbed ions was determined with the radio-isotopes  $Zn^{65}$ ,  $Cl^{36}$ ,  $S^{35}$ ,  $P^{32}$ , and  $Na^{24}$ . The ion exchange was studied by means of zinc oxide by pH measurement after sorption.

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66856

SOV/76-33-11-11/47

Data From the Conference on Physics and Physical Chemistry of Catalysis  
(March 1958). Influence of Sorbed Impurities on the Catalytic Properties of  
Zinc Oxide

equilibrium had been attained; a pH-meter of the type LP-5 was used. The sorption of the sodium ions increases with the increase of the pH of the solution, while the sorption of the chloride ions increases with a decrease of the pH. It is assumed that three types of sorption occur with the zinc ions: an irreversible chemical reaction at  $\text{pH} < 6.5$  (the formation of a basic zinc sulfate in case of small pH-values from zinc sulfate and sodium hydroxide was already observed by I. V. Tananayev and N. V. Mzareulishvili (Ref 7)), a reversible chemical sorption at  $\text{pH} > 9$ , and in the third case an ion exchange at  $\text{pH} 6.5-9.5$ . In analogy to the scheme recommended by B. P. Nikol'skiy (Ref 9) for the sorption properties of aluminum oxide, a corresponding scheme is recommended for zinc oxide. The authors investigated zinc oxide samples, with sorbed impurities, for their catalytic activity with respect to isopropanol decomposition at dynamic conditions and in adsorbed layers (Table 1). Impurities of sodium- and chloride ions increase the dehydrogenation capacity of the catalyst. The sorption of "acid" impurities, such as zinc sulfate and phos-

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66856

SOV/76-33-11-11/47

Data From the Conference on Physics and Physical Chemistry of Catalysis  
(March 1958). Influence of Sorbed Impurities on the Catalytic Properties of  
Zinc Oxide

phoric acid, intensifies the dehydration reaction. In the catalytic process in the adsorbed layer the decomposition reaction of the isopropanol shifts (in a large part of the samples investigated) toward the dehydration (in comparison to the dynamic conditions). In accordance with the data of O. V. Krylov and Ye. A. Fokina (Ref 10) it was established that the activation energy of the isopropanol dehydrogenation in the adsorbed layer is higher than under dynamic conditions. This difference may be explained by the heterogeneity of the zinc oxide surface and the inverse direction of the activation energy of the catalytic reaction and of the desorption energy of the reaction product, i.e. acetone (Table 2). There are 5 figures, 2 tables, and 10 Soviet references.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva  
(Academy of Sciences, USSR, Institute of Physical Chemistry,  
Moscow)

Card 3/3

YEGOROV, YE. V.

LEONOV, I. K., KOSTIN, B. O., KOCHEV, Ye. V.

Chemical and Physical (PZ) and other Polymer Materials by the localized action of neutron irradiation (see also p. 10) (1. Reaction)

Report presented at the Symposium on the Chemical Effects of Transformations of Matter, Gorky, 24-27 October 1960, sponsored by the USSR.

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2109

2209

S/190/60/002/012/007/019  
B017/B055

AUTHORS:

Barkalov, I. M., Gol'danskiy, V. I., Dzantiyev, B. G.,  
Yegorov, Ye. V.

TITLE:

The Welding of Teflon and Other Polymeric Materials by the  
Localized Action of Neutron Radiation

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 12,  
pp. 1801-1804

TEXT: A simple process was developed for local welding of Teflon and other polymeric materials by irradiating the materials to be welded with thermal neutrons after pretreatment of the material surface with boron- and lithium compounds. The following polymeric materials were welded: Teflon - polystyrene, Teflon - polymethyl methacrylate, polystyrene - polymethyl methacrylate, polyethylene - polystyrene, polyethylene - polymethyl methacrylate. Prior to irradiation, the surfaces to be welded were treated with solutions of boron- and lithium compounds and subsequently exposed to a thermal neutron flux from the HPT-1000 (IRT-1000) reactor. The tear resistance of the Teflon - polystyrene weld as a function of the mega-

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86322

The Welding of Teflon and Other Polymeric  
Materials by the Localized Action of Neutron  
Radiation

S/190/60/002/012/007/019  
B017/B055

roentgen dose applied to the surface, at constant  $B_2O_3$  concentration, was investigated and the results are shown in a figure. The tear resistance of the Teflon - polystyrene weld is 120 kg/cm<sup>2</sup>. The mechanism involved in welding polymeric materials by localized neutron irradiation is discussed. The thermal effect is assumed to be the main factor in this type of welding. Triple layer welding of polyethylene and Teflon and other polymeric and non-polymeric materials can be effected by applying interleaves of lithium- and boron-containing polystyrene films. There are 1 figure and 7 references: 5 Soviet and 2 US.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

SUBMITTED: May 17, 1960

Card 2/2

S/081/62/000/022/013/088  
B177/B186

AUTHOR: Yegorov, E. V.

TITLE: The possibility of using electron accelerators for the  
photoneutron determination of beryllium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 141, abstract  
22E17 (In collection: Vopr. rudn. geofiz., no. 3,  
M., Gosgeoltekhizdat, 1961, 147-159)

TEXT: A theoretical evaluation is presented on the possibility of using  
an electron accelerator for the photoneutron determination of  $\text{Be}^9$  in  
ores. It is demonstrated that the neutron yield is a linear function of  
the  $\text{Be}^9$  concentration in the sample, and the current strength at the  
target of the accelerator. An accelerator for  $\sim 2.7$  Mev with a mean  
current in the beam of  $\sim 280 \mu\text{a}$  (230 ma per pulse) with a tungsten target  
makes it possible to obtain up to 800 neutrons/min at a  $\sim 2 \cdot 10^{-3}\%$   
concentration of  $\text{BeO}$  in the sample. A concentration of  $\text{Be}^9$  in samples  
of up to  $10^{-5}\%$  can therefore be measured with this installation to an  
accuracy equally as good as that of existing installations with radio-

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The possibility of using electron ...

S/081/62/000/022/013/088  
B177/B186

active sources. By using electron accelerators for the purpose in question, the efficiency of photoneutron determinations of  $\text{Be}^9$  can be increased by a factor of 20-40, the measuring error can be reduced from 50 to 3-5% at  $\text{BeO}$  concentrations of  $\sim 10^{-3}\%$  in the sample, and the safety of the attendant personnel can be reliably ensured. [Abstracter's note: Complete translation.]

Card 2/2

GORDEYEVA, V.A.; YEGOROV, Ye.V.; ZHABROVA, G.M.; KADENATSI, B.M.;  
KUSHNEREV, M. Ya.; ROGINSKIY, S.Z.

Use of ionizing radiation in the study of the decomposition  
processes of copper and nickel oxalates. Dokl. AN SSSR 136  
no.6:1364-1367 F '61. (MIRA 14:3)

1. Institut fizicheskoy khimii AN SSSR. 2. Chlen-korrespondent  
AN SSSR (for Roginskiy).

(Copper oxalate)  
(Nickel oxalate)  
(Radiation)

S/844/62/000/000/097/129  
D234/D307

AUTHORS: Tarasova, Z. N., Dzantiyev, B. G., Yegorov, Ye. V., Kap-  
lunov, M. Ya., Petrova, S. B., Sobolev, V. S. and Dogad-  
kin, B. A.

TITLE: Investigation of rubber structurization under the action  
of accelerated electrons

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-  
mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,  
569-575

TEXT: Natural butadiene-styrene and carboxylate rubbers were in-  
vestigated. The energy of the electrons was 0.6, 1.6 and 2 Mev. The  
specimens were 0.02 - 0.3 mm thick films, 60 x 60 x 1 mm plates  
and 10 mm thick washers. Irradiation in free state in air from an  
accelerator (0.2 - 0.8 megarad/sec) showed less destruction than  
that from a  $Co^{60}$  source in inert atmosphere. In natural rubber, des-  
truction is much greater in the first case. In filled natural rub-  
ber it is less in the first case, in pre-vulcanized mixtures of

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Investigation of rubber ...

S/844/62/000/000/097/129  
D234/D307

carboxylate rubber it is equal in both cases. Thermomechanical stability of electron-irradiated vulcanized rubbers was about 4 times as high as that of  $\text{Co}^{60}$  irradiated rubbers. Those of carboxyl containing rubbers show high strength and wear resistance (abrasion index = 115  $\text{cm}^3/\text{kWh}$  for nonfilled rubbers irradiated with 24 megarad and 200  $\text{cm}^3/\text{kWh}$  for nonfilled sulphur rubbers). Chemical relaxation curve of these rubbers shows destruction and re-grouping of salt bonds in its initial part. There are 6 figures and 2 tables.

ASSOCIATION: NII shinnoy promyshlennosti (NII of the Tire Industry); Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR)

Card 2/2

13243  
S/844/62/000/000/104/129  
D444/D307

*1.2700 (000 1200)*  
AUTHORS: Barkalov, I. M., Gol'danskiy, V. I., Dzantiyev, B. G.  
and Yegorov, Ye. V.

TITLE: The welding of teflon and other polymeric materials by  
the localized action of neutron irradiation

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-  
mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,  
616-620

TEXT: When ionizing radiation is used for welding polymer and oth-  
er materials, its effect must be localized to avoid harmful des-  
tructive processes. The authors have developed a simple method for  
such localization of thermal-neutron effects: the parts to be  
joined are treated with compounds of boron or lithium. Boron con-  
centration (determined photometrically) in the surface layer was  
1 - 12 mg/cm<sup>2</sup>. There is an optimum dosage for maximum strength.  
The welding effect cannot be due to uniform heating of the layer  
and is attributed to localization of the heating effect in the

Card 1/2

The welding of teflon ...

S/844/62/000/000/104/129  
D444/D307

tracks of the strongly ionizing particles produced. The authors have patented a variant of this method, in which the surfaces to be joined have a film of polystyrene containing 1% by weight of boron, an irradiation time of 2 - 3 hours (longer times reduce strength) and doses in the film and in the bulk of the joined materials of 500 - 800 and 40 - 60 megarad, respectively, the following joint strengths (kg/cm<sup>2</sup>) were obtained: teflon with teflon, polyethylene, aluminum and quartz, 90 - 110, 90 - 100. 120 - 130 and 80 respectively; polyethylene with polyethylene and aluminum, 130 - 140 and 110 - 135, respectively; aluminum with polymethylmethacrylate 120 - 130. There are 2 figures and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR)

Card 2/2

S/844/62/000/000/115/129  
D207/D307

AUTHORS: Roginskiy, S. Z., Zhabrova, G. M., Gordeyeva, V. A.,  
Yegorov, Ye. V., Kadenatsi, B. M. and Kushnerev, M. Ya.

TITLE: The use of ionizing radiation in investigation of topo-  
chemical processes

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-  
mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,  
668-673

TEXT: A study was made of the differences between the topochemical  
processes of thermal decomposition and of decomposition, using 0.6  
- 2 Mev electrons. The substances decomposed were copper oxalate  
( $\text{CuC}_2\text{O}_4 \cdot 1/2\text{H}_2\text{O}$ ) and nickel oxalate ( $\text{NiC}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$ ) which were pre-  
pared by precipitating nitrate solutions with oxalic acid at  $50^\circ\text{C}$ ;  
the samples were in the form of thin layers of powder. Thermal de-  
composition in vacuum at  $280^\circ\text{C}$  yielded 85% Cu + 15%  $\text{Cu}_2\text{O}$  and 95%  
Ni + 2.0% NiO + 3% undecomposed residue. Thermal decomposition in  
air at about  $300^\circ\text{C}$  yielded 50% CuO + 50%  $\text{Cu}_2\text{O}$  and 100% NiO. Elec-  
Card 1/2

The use of ionizing ...

S/844/62/000/000/115/129  
D207/D307

tron irradiation ( $3.6 \times 10^9$  -  $3.3 \times 10^{10}$  rad) at  $100^\circ\text{C}$  yielded usually pure metals with large (10 - 40%) residues undecomposed oxalates; the metal yield increased with the radiation dose. Strong preliminary irradiation (at least  $0.6 \times 10^9$  rad) accelerated strongly the subsequent thermal decomposition in vacuum. The mechanisms of thermal and electron-bombardment decomposition were the same; holes generated by heat or irradiation neutralized partly or completely the double charged oxalate ions which then moved to the surface and were emitted as  $\text{CO}_2$ ; electrons also generated by heat or irradiation neutralized the doubly charged metal cations which yielded pure metals. Oxides were formed as an intermediate stage in the production of pure metals; in air, oxides were produced also by oxidation of the pure metal products. The essential difference between electron bombardment and heat lay in the greater carrier-generation efficiency of the former. There are 2 figures and 1 table.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry, AS USSR); Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR)

Card 2/2

39631  
S/195/62/003/004/001/002  
E075/E436

1.1600  
AUTHORS:

Zhabrova, G.M., Kadenatsi, B.M., Zvonov, N.V.,  
Yegorov, Ye.V., Azizov, T.S., Batalov, A.A.,  
Gerdeyeva, V.A., Glazunov, P.Ya.

TITLE:

Preparation of finely divided metals and oxides by  
radiation

PERIODICAL: Kinetika i kataliz, v.3, no.4, 1962, 610-613

TEXT: A possibility was investigated of preparing metals and oxides in a finely divided form by irradiation of  $Zr(OH)_4$ ,  $Al(OH)_3$ ,  $Fe(OH)_3$ , Ni and Cu oxalates and basic copper carbonate with accelerated electrons having the energy of 0.8 Mev. The temperature of the samples during irradiation (1 to 2 g) did not exceed 40 to 50°C. Thermal decomposition at 400 to 500°C was also carried out for comparison with the irradiated materials. The decomposition of all the compounds commenced at radiation doses exceeding  $10^8$  rads and was intense at  $10^9$  to  $10^{10}$  rads. At the latter doses the compounds were almost completely  
Card 1/3

S/195/62/003/004/001/002  
E075/E436

Preparation of finely ...

decomposed. It was shown that the specific surface of the metals and oxides prepared by the irradiation method exceeds in most cases that of the samples prepared by the usual high-temperature pyrolysis. An especially marked advantage was noticed for the radiolysis of Cu and Ni oxalates. The surface area of the oxalate decomposition products consisting predominantly of metals was sometimes 10 or more times that of the decomposition products obtained by vacuum pyrolysis. Radiolysis of  $Zr(OH)_4$  and  $Fe(OH)_3$  gives dispersed oxides having considerable surface areas.  $Al(OH)_3$  is an exception,  $Al_2O_3$  produced by the radiolysis having a similar surface area to that of  $Al_2O_3$  obtained by pyrolysis. The metals and oxides prepared by radiolysis may find application as low temperature catalysts and adsorbents. There are 2 figures and 2 tables.

ASSOCIATIONS: Institut khimicheskoy fiziki AN SSSR  
(Institute of Chemical Physics AS USSR)  
Institut atomnoy energii im. I.V.Kurchatova AN SSSR  
(Institute of Atomic Energy imeni I.V. Kurchatov  
AS USSR)

Card 2/3

Preparation of finely ...

S/195/62/003/004/001/002  
E075/E436

Institut fizicheskoy khimii AN SSSR  
(Institute of Physical Chemistry AS USSR)

SUBMITTED: March 15, 1962

Card 3/3

YEGOROV, Ye. V.

JARBOVA, G. M. [Zhabrova, J. M.]; EGOROV, E. V. [Yegorov, Ye. V.]

Regularities of sorbtion and iron exchange in the amphoteric  
oxides and hydroxides. Analele chimie 17 no.1:7-22 Ja-Mr '62.

ZHABROVA, G.M.; KADENATSI, B.M.; ZVONOV, N.V.; YEGOROV, Ye.V.; AZIZOV,  
T.S.; BATALOV, A.A.; GORDEYEVA, V.A.; GLAZUNOV, P.Ya.

Preparation of highly dispersed metals and oxides by irradiation.  
Kin.i kat. 3 no.4:610-613 J1-Ag '62. (MIRA 15:8)

1. Institut khimicheskoy fiziki AN SSSR, Institut atomnoy energii  
imeni I.V.Kurchatova AN SSSR i Institut fizicheskoy khimii AN SSSR.  
(Metallic oxides) (Radiation)

YEGOROV, Ye.V.; NOVIKOV, P.D.; RAZGON, D.R.; TSETLIN, B.L.

Radiation-induced chemical synthesis of new ion exchange  
sorbents of organomineral nature. Dokl. AN SSSR 146 no.6:1360-  
1362 0 '62. (MIRA 15:10)

1. Institut khimicheskoy fiziki AN SSSR i Institut  
elementoorganicheskikh soyedineniy AN SSSR. Predstavlenko  
akademikom M.I. Kabachnikom.  
(Sorbents) (Ion exchange)

ACCESSION NR: AR4042249

S/0081/64/000/008/S020/S020

SOURCE: Ref. zh. Khimiya, Abs. 8S102

AUTHOR: Rayevskiy, V. G.; Yegorov, Ye. V.; Mikhlin, V. E.; Gul', V. Ye.;  
Voyutskiy, S. S.

TITLE: Influence of radiochemical cross-linking of elastomers on their adhesion  
to fiberforming polymers

CITED SOURCE: Sb. Vy'sokomolekul. soyedineniya. Adgeziya polimerov. M., AN SSSR,  
1963, 89-93

TOPIC TAGS: elastomer, adhesion, polymer, radiochemistry, radiation vulcanization

TRANSLATION: The change of durability of adhesion of elastomers SKS-30 ARM-15, SKN-26  
and butyl rubber with polycaprolactam film during irradiation of samples by a flow  
of accelerated electrons was examined. It was determined that the change of  
resistance to separation during irradiation is described by curves passing  
through a maximum which corresponds to a definite integral dose of irradiation.

Card 1/2

ACCESSION NR: AR4042249

Thus the character of the change in adhesion strength during radiation vulcanization does not differ qualitatively from that observed earlier for cases of thermal vulcanization in the presence of vulcanizing agents. For samples with coatings of SKS-30 ARM-15 the dependence of the adhesion of this elastomer to polycaprolactam film was studied from the degree of its cross-linking during irradiation. The latter was characterized by the length of the section of molecular chain ( $M_c$ ), included between two nodes of the space lattice. It was shown that the limiting degree of cross-linking, after the achievement of which a drop of adhesion strength sets in, shifts under the influence of radiation in the direction of a smaller density of the lattice, as compared to that observed for thermal vulcanization in the presence of vulcanizing agents. This phenomenon is explained from the positions of diffusion theory of adhesion. The presence of a limiting degree of cross-linking during radiation vulcanization was observed also on rubber-fabric materials based on capron fabric with a coating of Nairit and SKS-30 ARM-15 applied by facing the fabric on a calender. From authors' abstract.

SUB CODE: MT, OC

ENCL: 00

Card 2/2

S/089/63/014/002/016/019  
B102/B186

AUTHORS: Yegorov, Ye. V., Kaplunov, M. Ya.

TITLE: Soveshchaniye po primeneniyu uskoriteley zaryazhennykh  
chastits v radiatsionnoy khimii (Conference on the Use of  
Charged-particle Accelerators in Radiation Chemistry)

PERIODICAL: Atomnaya energiya, v. 14, no. 2, 1963, 222-224

TEXT: The Conference was held in May 1962 by the Otdeleniye khimicheskikh nauk AN SSSR (Department of Chemical Sciences AS USSR). More than 50 lectures were delivered. The opening address was read by the Academician N.N. Semenov who gave a review on the development of radiation chemistry during the last 15 years. B.A. Kononov reported on design and construction of betatrons for therapy and research at the Tomskiy politekhnicheskii institut (Tomsk Polytechnic Institute); the 25-Mev betatron developed has a mean current of  $10^{-8}$  a and a dose rate of  $\sim 5000$  r/min at 1m distance. S.P. Kapitsa reported on a microtron developed at the Institut fizicheskikh problem AN SSSR (Institute of Physical Problems AS USSR). F.G. Zheleznyakov gave details on new small-scale electrostatic

Card 1/3

Soveshchaniye po primeneniyu ...

S/089/63/014/002/016/019  
B102/B186

generators of 1-2 Mev; in 1963 a 25-kw cascade generator will be built which will deliver 2.5-Mev electrons. O.A. Val'dner from the Moskovskiy inzhenerno-fizicheskiy institut (Moscow Institute of Physical Engineering) reported on new accelerators designed and constructed at his institute (linear pulsed travelling-wave electron accelerators of 3,5, and 10 Mev and 500-700 w). V.L. Karpov and L.V. Chepel' (Fiziko-khimicheskiy institut AN SSSR im. L. Ya. Karpova - Physicochemical Institute AS USSR imeni L. Ya. Karpov) spoke on the technical parameters of electron accelerators used for pilot-plant radiation-chemical processes. The necessary properties of electron accelerators used for rubber vulcanization was dealt with by Z.N. Tarasova, V.K. Khozak, Ye.V. Yegorov, M.Ya. Kaplunov, and V.S. Sobolev (NII shinnoy promyshlennosti - NII of the Tire Industry; Institut khimicheskoy fiziki AN SSSR - Institute of Chemical Physics AS USSR). A.P. Sechenkov reported on the construction of an electrostatic accelerator (0.5 Mev, 250  $\mu$ a), D.I. Margolin on the EG-2,5 (EG-2,5) electrostatic generator (0.3-2.0 Mev;  $5 \cdot 10^{-3}$ -200  $\mu$ a), P.Ya. Glazunov on a 1.2-Mev electrostatic generator and N.Ya. Buben on the 2- and 0.8-Mev accelerators of the Institute of Chemical Physics AS USSR. It was pointed out that linear accelerators for special

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Soveshchaniye po primeneniyu ...

S/089/63/014/002/016/019  
B102/B186

purposes with 2-8 Mev and 3 ma and electrostatic accelerators with 1.5 Mev and 1-5 ma should be developed and the following technical problems should be solved: extraction of 20 - 50 kw beams from the accelerator; beam deflection about 90° and beam scanning; development of filters for deep dose leveling; introduction of the beam into reaction vessels at up to 100 atm and 300°C; reduction in price of 1 kwhr of the beam power.

✓

Card 3/3

... Gul', V. Ye.; Yegorov, Ye. Ye., ...

**"APPROVED FOR RELEASE: 09/01/2001**

**CIA-RDP86-00513R001962510009-8**

**APPROVED FOR RELEASE: 09/01/2001**

**CIA-RDP86-00513R001962510009-8"**

Legurov, Ie. V.; Rapoport, V. B.; Shumenov, V. V.; Goldanskiy, V. I. 7

GOL'DANSKIY, V.I.; GUSAKOVSKAYA, I.G.; YEGOROV, Ye.V.; KOROLEV, G.V.;  
PAPOPORT, V.B.

Radiation polymerization of polyacrylates. Dokl. AN SSSR 160  
no.3:646-649 Ja '65. (MIRA 18:3)

1. Institut Khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent  
AN SSSR (for Gol'danskiy).

YEGOROV, Ye.V.; MOROZOV, Yu.L.; KHOMUTOV, A.I.

Radiation chemical synthesis of new organomineral ion-exchange materials. Izv. AN SSSR. Ser. khim. no.11:2071-2072 '65.  
(MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR, Institut elemento-organicheskikh soyedineniy AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut steklyannogo volokna.

ACC NR: AP7000912

(A)

SOURCE CODE: UR/0138/66/000/012/0015/0018

AUTHOR: Kim, I. P.; Yegorov, Ye. V.; Gol'danskiy, V. I. Dogadkin, B. A.; Tarasova, Z. N.

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii); Institute of Chemical Physics AN SSSR (Institut khimicheskoy fiziki AN SSSR); Scientific Research Institute of the Tire Industry (Nauchno-issledovatel'skiy institut shinnoy promyshlennosti)

TITLE: Radiation—induced vulcanization with 20—30 Mev electrons

SOURCE: Kauchuk i rezina, no. 12, 1966, 15-18

TOPIC TAGS: radiation induced vulcanization, fast electron, high energy electron, irradiation vulcanizate, induced radioactivity

ABSTRACT: The radioactivity of rubbers, rubber mixtures, and their ingredients irradiated with 20—30 Mev electrons has been investigated. The study was undertaken because 5—10 Mev electrons, currently used in radiation-induced vulcanization, penetrate only to a small depth (2—4 cm in a substance with a density of 1 g/cm<sup>3</sup>) and, therefore, are unsuitable for the vulcanization of large-size products. Theoretical analysis of the problem and experiments showed that: 1) the reactions proceed under the effect of electromagnetic radiation generated as a result of deceleration of fast electrons in the substance; 2) irradiation of rubbers, rubber

Card 1/2

UDC: 678.028:66.085

ACC NR: AP7000912

mixtures, and their ingredients with fast, 20-30 Mev electrons forms the radioactive isotopes  $C^{11}$ ,  $O^{15}$  and  $Zn^{63}$  as a result of  $\gamma$ , n-type photonuclear reactions; 3) owing to the short halflife (minutes or tens of minutes) of these isotopes, the radioactivity which is induced in the irradiated specimens decays in a matter of hours; 4) rubbers, rubber mixtures, and their ingredients are not activated with secondary neutrons; 5) the use of fast, 20-30 Mev electrons for the vulcanization of large-size rubber products presents no danger for personnel, provided that the irradiated products are held in isolation for one day. Orig. art. has: 2 figures and 2 tables.

SUB CODE: 112012/ SUBM DATE: 12Jul65/ ORIG REF: 005/ OTH REF: 002/ ATD PRESS: 5108

Card 2/2

L 07336-67 EWT(m)/EWP(v)/EWP(j) IJP(c) WW/GG/GD/RM

ACC NR: AT6034058

SOURCE CODE: UR/0000/66/000/000/0337/0340

AUTHOR: Voyutskiy, S. S.; Gol'danskiy, V. I.; Gul', V. Ye.; Gustov, V. V.; Yagorov, Ye. V.; Rayevskiy, V. G.

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR); Moscow Technological Institute of the Meat and Dairy Industry (Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti); Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Effect of radiation on the adhesion of certain polymers

SOURCE: Simpozium po radiatsionnoy khimii polimerov. Moscow, 1964. Radiatsionnaya khimiya polimerov (Radiation chemistry of polymers); doklady simpoziuma. Moscow, Izd-vo Nauka, 1966, 337-340

TOPIC TAGS: adhesion, elastomer, polyethylene, cellophane, polycaprolactam, glass, irradiation, finishing

ABSTRACT: A study has been made of the effect of radiation on the adhesion of certain elastomers or polyethylene to such substrates as cellophane, polycaprolactam films or glass. The specimens were prepared and irradiated with fast electrons with integral doses of up to  $10^8$  rad. It was shown that the adhesion attains a maximum at a given dose and

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ACC NR: AT6034058

2

then drops with a further increase of the dose. The increase of the adhesion was attributed to the radiation-induced acceleration of the diffusion of macromolecular segments in the contact zone. The drop of the adhesion with a further increase of the dose was explained either as cross-linking in the elastomers (butadiene-styrene and nitrile rubbers) which causes shrinkage stresses, or as degradation (butyl rubber). High adhesion was attained by irradiation of specimens prepared with cellophane or glass finished with vinyltrichlorosilane. In the case of cellophane, adhesion increased with dose up to  $\sim 10^7$  rad (maximum radiation withstood by the substrate) to attain  $\sim 275$  g/cm. Adhesion of polyethylene to glass was increased to about 400 g/cm by combining vinyltrichlorosilane/finishing of the substrate with irradiation with doses up to  $5 \times 10^7$  rad. The high adhesion of systems subjected to this combined treatment was attributed, in addition to the acceleration of diffusion phenomena, to chemical bonding between the adhesive and the modified substrate. Orig. art. has: 4 figures.

SUB CODE: 07, 11/ SUBM DATE: 25Jul66/ ORIG REF: 006/ OTH REF: 002  
ATD PRESS: 5101

Card 2/2

vmb

YEGOROV, Ya., (Rostov-na-Donu); KOLOTYGIN, Ye., (Rostov-na-Donu).

Miniature tube low frequency amplifier. Radio no.10:46 '56.

(Amplifiers, Electron-tube)

YEGOROV, Yu. [IEhorov, IU.]; SHCHERBAK, V., red.; LEVCHENKO, O.,  
tekhn.red.

[The Ukraine through the eyes of our guests from abroad;  
collection.] Ukraina ochyma zarubizhnykh hostei; zbirnyk.  
Kyiv, Derzh.vyd-vo polit.lit-ry URSR, 1959. 146 p.

(Ukraine--Description and travel)

(MIRA 13:5)

YEGOROV, Yu. (g. Lyubertsy)

Let me tell you about a new parquet floor. Nest.prom.1 khud.  
promys. 3 no.3:14-15 Mr '62. (MIRA 15:3)  
(Parquet floors)

YEGOROV, Yu. (Moskva)

Searching for new ideas. Mest.prom.i khud.promys. 3 no.4:24-25  
Ap '62. (MIRA 15:5)

(Moscow Province--Salvage (Waste, etc.))

YEGOROV, Yu. (Moskva)

Causes of the poor sound of the piano, Vest.prom. i khud. promys.  
4 no. 2:10-11 F '63.

(MIRA 16:1)

LEONOVA, S.; PARKHOMENKO, A.; BRUSSER, I.; MERKINA, N.; MARTYENKO, G.;  
YEGOROV, Yu. (Leningrad); NUTSKIY, Ya.; ARTEMOV, N.; ZHEUDSKIY, Yu.

We can learn from the practices applied in Leningrad. Mest.prom.  
i khud.promys. 3 no.5:13-20 My '62. (MIRA 15:6)

1. Zamestitel' predsedatelya Gosudarstvennogo komiteta Soveta  
Ministrov RSFSR po delam mestnoy promyshlennosti i khudozhest-  
vennykh promyslov RSFSR (for Leonova). 2. Upravlyayushchiy  
kontoroy "Lengorvtorsyr'ye" (for Parkhomenko). 3. Direktor  
Leningradskoy Sortirovochno-moyechnoy fabрики No.1 kontory  
"Leningradsyr'ye" (for Brusser). 4. Glavnyy inzh. Leningradskoy  
Sortirovochno-moyechnoy fabрики No.1 kontory "Lengorvtorsyr'ye"  
(for Merkina). 5. Direktor fabрики "Vtorprom" kontory  
"Lengorvtorsyr'ye" (for Martynenko). 6. Spetsial'nyy korrespondent  
zhurnala "Mestnaya promyshlennost' i khudozhestvennyye promysly",  
(for Yegorov). 7. Inspektor po kadram fabрики "Trud" (for  
Nutskiy). 8. Direktor fabрики "Trud", g. Leningrad (for Artemov).  
9. Zamestitel' direktora fabрики "Trud", g. Leningrad (for  
Zhmudskiy).  
(Leningrad--Salvage (Waste, etc))

MURZALIYEVA, Kh.Ye., zasl. deyatel' nauki, doktor med. nauk, prof.;  
KUSAINOVA, G.K., kand. med. nauk; YEGOROV, Yu., red.;  
BYCHKOVA, E., red.

[Pregnancy and infectious hepatitis (Botkin's disease)] Beremen-  
nost' i infektsionnyi gepatit (bolezni Botkina). Alma-Ata,  
"Kazakhstan" 1965. 177 p. (MIRA 18:12)

YEGOROV, Yu. (poselok Karacharovo, Moskovskoy oblasti)

With giant steps. Mest.prom.1 khud.promys 2 no.5:16-17 My '61.  
(MIRA 14:5)

(Moscow Province—Woodworking industries)

YEGOROV, Yu.

We head toward communism. Mest.prom.i khud.promys. 2 no.8:  
10-11 Ag '61. (MIRA 14:9)  
(Moscow--Woodworking industries--Labor productivity)

VAFINA, N., master muzhskogo verkhnego plat'ya; NOVRUZOV, M.;  
CHEREPNINA, M.; ZAITBERG, L. (Kiyev); YEGOROV, Yu. (Pererva);  
FEDOSENKO, A. (Minsk); LYUTSKO, A.; SMIRNYAGIN, V., instruktor;  
NIKOLAYEV, I.; KHARAK, G.

Our labor gifts to the congress of the builders of communism.  
Mest.prom.i khud.promys. 2 no.10:2-5 0 '61. (MIRA 14:11)

1. Shveyunny kombinat, g. Ivanova (for Vafina). 2. Sekretar' partbyuro kombinata nadomnogo truda, Baku (for Novruzov).
3. Sekretar' obkoma profsoyuza rabochikh mestnoy promyshlennosti i kommunal'nogo khozyaystva, Rostov-na-Donu (for Cherepnina).
4. Glavnyy inzhener raypromkombinata, g. Slonim Belorusskoy SSR (for Lyutsko). 5. Respublikanskiy komitet profsoyuza rabochikh mestnoy promyshlennosti i kommunal'nogo khozyaystva, Kishinev (for Smirnyagin). 6. Sekretar' oblastnogo komiteta profsoyuza rabochikh mestnoy promyshlennosti i kommunal'nogo khozyaystva, Pskov (for Nikolayev). 7. Nachal'nik otdela truda i zarplaty Ministerstva mestnogo khozyaystva Estonskoy SSR, Tallin (for Kharak).

(Efficiency, Industrial)

ZAMYSLOVA, Zinaida Alekseyevna; YEGOROV, Yu., red.; TROYANOVSKAYA, N.,  
tekhn. red.

[International labor movement during the intensification of  
revolutionary activity, 1918-1923] Mezhdunarodnoe rabochee  
dvizhenie v period revoliutsionnogo pod"ema 1918-1923 godov.  
Moskva, Gospolitizdat, 1962. 60 p. (MIRA 15:8)  
(History, Modern) (Labor and laboring classes)

YEGOROV, ~~Y.~~

Story about ordinary events. Mest.prom.i khud. promys. 3 no.1:25-27  
Ja '63. (MIRA 16:2)

1. Spetsial'nyy korrespondent zhurnals "Mestnaya promyshlennost'  
i khudozhestvennyye promysly".  
(Bogatye Saby District—Industrial organization)

YEGOROV, Yu. A.

UKHOV, B.S., prof., doktor tekhn.nauk [deceased]; VOROB'YEV, V.A., prof., doktor tekhn.nauk, zasluzhennyy deyatel' nauki i tekhniki; YEGOROV, Yu.A., prof., doktor iskusstvovedcheskikh nauk; STRAMENTOV, A.Ye., prof., doktor tekhn.nauk; SIROTKIN, V.P., prof., doktor tekhn.nauk; TOROPOV, A.S., dotsent, kand.tekhn.nauk; KRYLOV, B.A., kand.tekhn.nauk; SHREYBER, A.K., kand.tekhn.nauk; OSMOLOVSKIY, M.S., dotsent, kand.arkhitektury, inzh.-arkhitektor; POGODIN-ALEKSEYEV, G.I., prof., doktor tekhn.nauk, obshchiy red.; NAYMOV, N.A., dotsent, kand.tekhn.nauk, nauchnyy red.; KOKOSKO, A.G., red.; NAUMOV, K.M., tekhn.red.

[Industrial and residential construction; textbook for higher party schools] Promyshlennoe i grazhdanskoe stroitel'stvo; uchebnoe posobie dlia vysshikh partiinykh shkol. Moskva, 1959. 434 p.

(MIRA 13:2)

1. Kommunisticheskaya partiya Sovetskogo soyuza. Vysshaya partiynaya shkola. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury (for Stramentov). 3. Rukovoditel' kafedry promyshlennogo proizvodstva i stroitel'stva Vysshey partiynoy shkoly pri Tsentral'nom komitete Kommunisticheskoy partii Sovetskogo soyuza (for Pogodin-Alekseyev.)

(Construction industry)

(City planning)

YEGOROV, YURIY ALEKSEYEVICH

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885.1  
.Y4

Gradostroitel'stvo belorussii (City building in Belorussia) Moskva, Goss-  
troizdat, 1954.  
281 p. illus., diagrs.

SOV-120-58-3-5/53

AUTHOR: Yegorov, Ye. A.

TITLE: A Scintillation Spectrometer for Fast Neutrons (Svintillyatsionnyy spektrometr bystrykh naytronov)

PERIODICAL: Priroda i Tekhnika Eksperimenta, 1958, Nr 3, pp 21-26 (USSR)

ABSTRACT: Two scintillation spectrometers have been constructed. Using the spectrometer with a scattering angle of  $45^\circ$  the spectrum of a Po+Be source has been measured. The other spectrometer, employing a scattering angle of  $70^\circ$ , was calibrated, using the  $\alpha$ -spectrum of  $\text{Po}^{210}$  and the  $\beta$ -spectrum of  $\text{Cs}^{134}$  and  $\text{Sr}^{89}$ . As a check of the work of the spectrometers, absorption spectra of fast neutrons absorbed in concrete, water and paraffin were measured. The measurements were carried out on a heavy water nuclear reactor. Experiments have shown that the spectrometer will work reliably even in the presence of a high  $\gamma$ -background and may be used for measurements with different neutron sources. The fast neutrons having passed through a collimator consisting of paraffin with borax and lead enter a stilbene crystal mounted on a photomultiplier. In the crystal the fast neutrons are scattered by hydrogen nuclei so that recoil protons are formed

Card 1/3

SOV-120-58-3-3/33

A Scintillation Spectrometer for Fast Neutrons

and produce scintillations in the crystal. Those neutrons which were scattered at an angle of  $70^\circ$  enter another system consisting of a liquid scintillator placed in a light guide of organic glass and looked at by five photomultipliers. Since the energy of the neutrons scattered at  $70^\circ$  is about 0.1 of the energy of the incident neutrons, the scattered neutrons have sufficient energy to produce recoil protons by which they are detected. For this reason the liquid scintillator is hydrogenous. The five photomultipliers are arranged in parallel. Under these conditions the efficiency of the spectrometer lies between 0.57% (1 Mev) and 0.05% (12 Mev). The geometrical resolution of the spectrometer is 5%. When a neutron is scattered in the stilbene crystal a pulse is produced at the output of the photomultiplier and the amplitude of this pulse is proportional to the energy of the neutron. This pulse is recorded in coincidence with the output from the liquid scintillator, a delay having been applied to the latter pulse to allow for the time taken by

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the neutron in travelling from the point where the scattering took place to the liquid scintillator. There are 8 figures, no tables and 4 references, of which 3 are English and 1 Soviet.

SUBMITTED: September 9, 1957.

1. Spectrum analyzers--Calibration
2. Spectrum analyzers--Performance
3. Spectrum analyzers--Test methods
4. Spectrum analyzers--Effects of radiation
5. Photomultipliers--Applications

Card 3/3

YEGOROV, Yu.A.; KHUKHOREV, D.S.

Using light pipes in scintillation counters. Prib.i tekhn.eksp.  
no.4:136-137 J1-Ag '60. (MIRA 13:9)  
(Scintillation counters)

29598

S/120/61/000/004/007/034

E032/E514

216000

AUTHORS: Yegorov, Yu.A. and Panov, Ye.A.

TITLE: A scintillation gamma-dosimeter

PERIODICAL: Pribery i tekhnika eksperimenta, 1961, No.4, pp.57-58

TEXT: The present authors have developed a dosimeter whose indications are independent of the energy of the incident  $\gamma$ -rays. The scintillator is of the composite form shown in Fig.1 in which 1 is a plastic block (polystyrene + terphenyl + POPOP), 2 is a CsI/Tl crystal and 3 is a plug made of the same material as the plastic scintillator. The block 1 is in the form of a cylinder (50 mm long); the volume of the CsI(Tl) crystal is  $\sim 1.5 \text{ cm}^3$ . Optical contact is ensured by a layer of vaseline oil. Fig.2 shows the sensitivity of the dosimeter as a function of the incident  $\gamma$ -ray energy (MeV). The composite scintillator is mounted on a  $\Phi 3Y-29$  (FEU-29) photomultiplier and is surrounded by a suitable reflector. The output of the photomultiplier is fed into the circuit shown in Fig.3. The sensitivity ranges are 0.3, 1.5, 7.5, 30, 150, 750, 3000  $\mu\text{r/sec}$ . The accuracy is of the order of 5%. The zero can be established by means of the 3 M $\Omega$

Card 1/02

A scintillation gamma-dosimeter

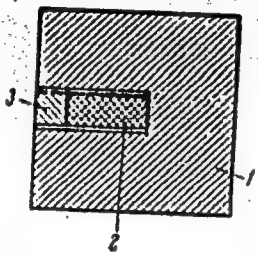
25590

S/120/61/000/004/007/034  
E032/E514

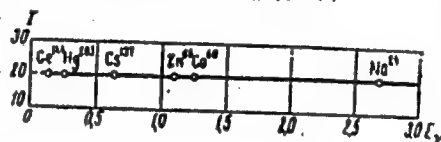
**E032/E514**

resistor in the grid of the right-hand side of the double triode. In order to prevent zero drift, the d.c. amplifier supplies are derived from a stabilized power pack. Experiments showed that the zero drift does not exceed  $0.002 \mu\text{r/sec}$ . The probe is connected to the control box by a 25 m lead. The scintillation  $\gamma$ -dosimeter is being used in studying the shielding properties of materials. There are 3 figures and 2 Soviet references.

SUBMITTED: October 22, 1960



**Fig. 1**



**Fig. 2**

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2122

S/170/61/004/006/011/015  
B129/B212

26.2263

AUTHORS: Yegorov, Yu. A., Pankrat'yev, Yu. V.

TITLE: Fast-neutron spectrometer with one indicator

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 6, 1961, 112-115

TEXT: A fast-neutron spectrometer with a high gamma background is described. The separation of the recoil proton and electron pulses is based on the difference in the fluorescence time of the scintillator when irradiated by heavy and light particles. It is known that several organic scintillators show this difference in the fluorescence time when irradiated by heavy particles (alpha particles and protons) and by electrons. This time difference depends on the different ionization capability of the heavy and light particles. There are more ionized molecules along the track of a heavy particle in the scintillator than along that of an electron. After about  $10^{-9}$  sec the excited molecules will return into their normal state and the ionized ones after about  $10^{-7}$  sec. Therefore the fluorescence will take place in two parts for both cases: viz. a

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23755

S/170/61/004/006/011/015  
B129/B212

Fast-neutron spectrometer...

fast and slow part. The slow part caused by heavy particles will last longer than that caused by light particles. Therefore, the mean fluorescence time during irradiation of the scintillator by heavy particles will be greater than that by light particles. The front of the current pulse in the photo-multiplier will also differ for both kinds of particles viz. that caused by light particles will be steeper than that caused by the other particles. Stilbene crystals possess such properties. Pulses of different shapes are produced if such a crystal is irradiated by neutrons and gamma rays, so that pulses of neutrons can be distinguished on the background of gamma rays. Stilbene crystals possess such properties. Fig. 1 shows a pulse discriminator, which is used in the spectrometer described in connection with a stilbene crystal to determine fast neutrons with one pickup. Fig. 3 shows a block diagram of this instrument. This fast-neutron scintillation spectrometer is not sensitive to a gamma background when irradiated by neutrons having an energy  $E_n > 2$  Mev. Fig. 4 shows the measurement results obtained with this spectrometer. There are 4 figures and 3 non-Soviet-bloc references. The references

Card 2/6

23/55

Fast-neutron spectrometer...

S/170/61/004/006/011/015  
B129/B212

to English-language publications read as follows: Brooks F. D., Nuclear Instruments and Methods 4, 151, 1959; Wright G. T. Proc. Phys. Soc., B.49, 358, 1958; Kallman H. and Brucker G. I. Phys. Rev., 108, 1122, 1957; Owen R. B. IRE Transition Nuclear Science No. 5, No.3, 198, 1958. Whitmore B. G. Phys. Rev. 78, 6, 799, 1950.

SUBMITTED: March 2, 1961

Card 3/6

YEGOROV, Yu.A.; KUCHERYAYEV, V.A.

Possibility of using certain organic scintillators for dosimetry.  
Inzh.fiz.zhur. 4 no.7:117-119 J1 '61. (MIRA 14:8)  
(Scintillation counters) (Radiation--Dosage)

25565

S/170/61/004/008/015/016  
B125/B201

21.6000

AUTHORS: Yegorov, Yu. A., Panov, Ye. A.  
TITLE: Measurement of the dose rate of gamma radiation by a  
scintillation dosimeter  
PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 8, 1961, 130-131

TEXT: The sensitivity of a scintillation counter with an inorganic scintillator, e.g., with NaI(Tl) or CsI(Tl) crystals, rises with a drop of gamma-quantum energy. This justifies the assumption that a scintillation dosimeter with combined scintillator (consisting, e.g., of an organic plastic scintillator and an inorganic crystal) is independent of rigidity in a sufficiently wide range of gamma-quantum energies. The organic plastic scintillator (on the basis of polystyrene with addition of terphenyl and ROROR) used in these experiments was 50 mm in both diameter and height. This scintillator was fastened with Vaseline oil onto an Ф39 -29 (FEU-29) photomultiplier, the mean current strength of which was amplified by a d-c amplifier and measured by a microammeter. Curve a of

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S/170/61/004/008/015/016  
B125/B201

Measurement of the dose rate...

Fig. 1 was found for sensitivity as a function of the gamma-quantum energy in the course of irradiation of the plastic scintillator by gamma radiation of the sources  $\text{Ce}^{141}$  ( $E_\gamma = 140$  kev),  $\text{Cs}^{137}$  ( $E_\gamma = 661$  kev),  $\text{Hg}^{203}$  ( $E_\gamma = 280$  kev), and  $\text{Zn}^{65}$  ( $E_\gamma = 1120$  kev). Using the same gamma-radiation sources, also the energy dependence of the sensitivity of the instrument was determined for an inorganic  $\text{CsI(Tl)}$  crystal. In this case, sensitivity rises with a drop of gamma-quantum energy (Fig. 1, Curve b). These curves a and b were normalized for a gamma-quantum energy of 1120 kev. A comparison between a and b shows that the effect of gamma-quantum energy upon the sensitivity of the instrument can be eliminated by a simultaneous use of a plastic scintillator and a  $\text{CsI(Tl)}$  crystal with a photomultiplier. By placing variously sized, small  $\text{CsI(Tl)}$  crystals into a cavity in the plastic scintillator it was possible to choose a ratio between the volume of the plastic scintillator and that of the  $\text{CsI(Tl)}$  crystal such that the dependence of the sensitivity of the instrument upon the gamma-quantum energy was characterized by a straight line in the gamma-quantum energy range from 140 kev to 1.120 Mev. The volume of the  $\text{CsI(Tl)}$  crystal

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Measurement of the dose rate...

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B125/B201

amounted to  $\sim 1.5 \text{ cm}^3$ . When the gamma-quantum energy was augmented to 2.76 Mev ( $\text{Na}^{24}$ ), the energy dependence of sensitivity was conserved. This dependence was also checked by measuring the given dose rate of gamma radiation from sources with a complicated gamma spectrum ( $\text{Cs}^{134}$  and  $\text{Ag}^{110}$ ). The measured dose rate corresponded exactly to calculations, i.e., these measurements also confirmed the sensitivity of the dosimeter to be independent of the gamma-quantum energy. When using a scintillator composed of a plastic scintillator (volume  $\sim 65 \text{ cm}^3$ ) and a  $\text{CsI(Tl)}$  crystal (volume  $1.5 \text{ cm}^3$ ) it is possible to construct a scintillation dosimeter being independent of rigidity. There are 1 figure and 2 Soviet-bloc references.

SUBMITTED: October 25, 1960

Card 3/4

ACCESSION NR: AT4019050

S/0000/63/000/000/0207/0210

AUTHOR: Avayev, V. N.; Yegorov, Yu. A.; Yemel'yanov, I. Ya.; Zhirnov, A. D.; Orlov, Yu. V.; Remizov, V. A.

TITLE: The Gamma-spectrum of a research reactor

SOURCE: Voprosy\* fiziki zashchity\* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 207-210

TOPIC TAGS: reactor, reactor shielding, reactor Gamma spectrum, Gamma spectrum

ABSTRACT: By means of a scintillation vapro spectrometer, the  $\gamma$ -spectrum of a water-water, pool-type research reactor was measured. The gamma quanta were directed from the active section of the reactor to the spectrometer through a lateral experimental channel, 100 mm in diameter and 2.5 m in length. To exclude the influence of gamma quanta scattered in the channel, a lead collimator, 180 mm in length with a collimation aperture diameter of 10 mm, was inserted in the channel. The spectrometer sensor was placed behind the concrete shielding of the reactor, and the gamma quanta flow passed through a 260-mm long collimator of paraffin with boron and lead carbide. Since the spectrometer was neutron-sensitive, even if only to a negligible degree, tests were conducted under identical conditions with a 100-mm thick bismuth filter and the introduction

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1/3

ACCESSION NR: AT4019050

of the proper corrective factor. The results of the experiment are discussed and analyzed. The reactor spectrum was measured to approximately 7.8 Mev. No gamma lines with greater energy were detected, the explanation for this being that in the high energy region the  $\gamma$ -radiation is basically caused by the absorption of neutrons by iron, nickel and chromium. These elements are not present in the active part of the reactor, while the  $\gamma$ -radiation yield from the tube of the gate valve is small and only a negligible part of the trapped gamma quanta is able to reach the spectrometer sensor from the tube. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 14Aug63

DATE ACQ: 27Feb64

ENCL: 01

SUB CODE: NS

NO REF SOV: 005

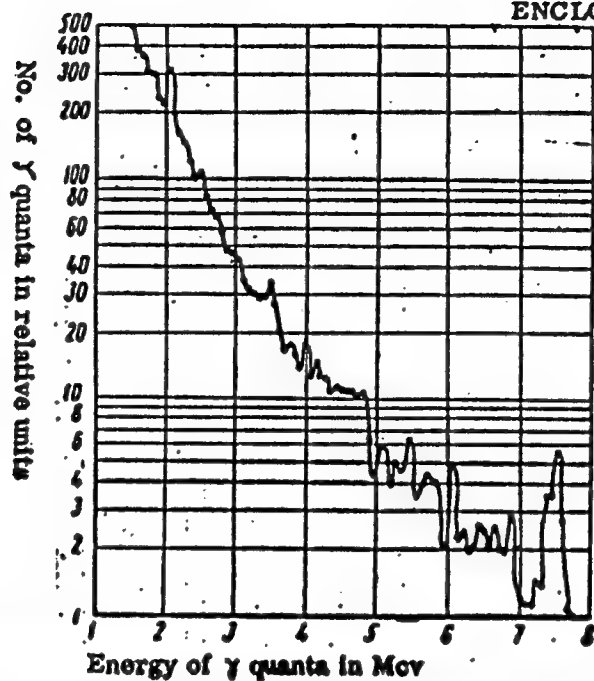
OTHER: 001

Card <sup>2/3</sup>

ACCESSION NR: AT4019050

ENCLOSURE: 01

Fig. 1 - Gamma-spectrum  
of the reactor.



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AM4016106

BOOK EXPLOITATION

S/

YEgorov, YUriy Aleksandrovich

Scintillation spectrometry of gamma radiation and fast neutrons  
( (Stsintillyatsionny\*y metod spektrometrii gamma-izlucheniya i  
by\*stry\*kh neytronov) Moscow, Gosatomizdat, 63. 0304 p. illus.,  
biblio. 6,000 copies printed.

TOPIC TAGS: scintillation spectrometry, Gamma ray spectrometry,  
fast neutron spectrometry, scintillation counter, photomultiplier,  
amplitude resolution, resolution time, single crystal spectrometer,  
double crystal spectrometer, time of flight spectrometer, spectro-  
meter telescope .

PURPOSE AND COVERAGE: The book contains a generalization of the  
main problems of the scintillation method of  $\gamma$ -ray and fast-neutron  
spectrometry. It covers the physical principles of the scintillation  
methods and the various types of spectrometer equipment, with special

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attention to the calculation of spectrometer characteristics by the Monte Carlo method, data reduction and interpretation methods for all types of spectrometers, measurement and processing of continuous spectra and of spectra produced by extended sources or produced inside a scattering medium, and the effect of background. The material is illustrated by many applications of scintillation spectrometers in nuclear reactor practice. An attempt is made to include the results of all the most important Soviet and other work on scintillation spectrometry.

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Ch. I. Main elements of scintillation spectrometers and their characteristics - - 5

Ch. II. Scintillation spectrometers for  $\gamma$  radiation - - 70

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AM4016106

Ch. III. Scintillation spectrometers for fast neutrons - - 193

Appendices - - 299

SUB CODE: PH, NS, SD

SUBMITTED: 01Jun63

NR REF SOV:

046

OTHER: 038

DATE ACQ: 14Nov63

Card 3/3

BRODER, D.L., red.; VESELKIN, A.P., red.; YEGOROV, Yu.A., red.;  
ORLOV, V.V., red.; TSYPIN, S.G., red.; FODOSHVINA, V.A.,  
red.; NIKITINA, T.K., red.; VLASOVA, N.A., tekhn. red.

[Problems in the physics of reactor shielding] Voprosy fiziki  
zashchity reaktorov; sbornik statei. Moskva, Gosatomizdat,  
1963. 345 p. (MIRA 16:12)  
(Nuclear reactors--Shielding (Radiation))

L 17336-63 EPR/EWP(j)/EWT(d)/EPF(c)/EPF(n)-2/EWT(m)/FCC(w)/BDS AFFTC/  
 ASD/IJP(C)/SSD Pr-4/Ps-4/Pc-4/Pu-4 RM/WW

ACCESSION NR: AP3004886

S/0120/63/000/004/0039/0045

AUTHOR: Avayev, V. N.; Yegorov, Yu. A.; Orlov, Yu. V.; Frolov, A. S.;  
Chentsov, N. N.

TITLE: Fast-neutron spectrometer with borane scintillator

SOURCE: Pribery*19*i tekhnika eksperimenta, no. 4, 1963, 39-45

TOPIC TAGS: spectrometer, fast-neutron spectrometer, borane scintillator,  
 scintillator

ABSTRACT: Fundamental characteristics of the fast-neutron spectrometer with  
 one primary detector were calculated on a computer by the Monte-Carlo method.  
 Detailed calculating procedure is illustrated by a chart. "Pseudo-random  
 numbers of the type suggested by N. M. Korobov were used in the calculations."  
 The accuracy of the calculations is held to be 15% or better. Made for three  
 scintillators, the calculations permitted determining efficiency, proper energy

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